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BIRD NOTES FROM NORTH-EAST LINCOLNSHIRE DURING THE AUTUMN MIGRATION OF 1899.

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THE autumn migration of 1899 resembled that of the previous year in the absence of any of those great migratory movements generally called "rushes," but differed in the absence of that quiet daily inflow of birds which characterised almost the whole of that season.

A remarkable feature in the past autumn was the scarcity of all Waders except Curlews, Grey and Golden Plovers, and Knots.

The first movement of land birds occurred on Aug. 23rd, but only comprised two or three species, and was scarcely noticeable. Throughout September very little migration took place. West and south-west winds prevailed during the whole month, the latter half of which was decidedly stormy.

The principal movements of the season occurred during October and the first half of November at four separate periods or rushes, namely, Oct. 4th to 9th, 17th to 21st, 27th to 30th and Nov. 7th to 10th. Much migration was, however, in progress all through October and the early part of November. October opened with much rain, and a gale from the east, which changed to south-west on 2nd and 3rd. The rest of the month was fairly calm, with south and south-west winds during the first half, and easterly winds from 14th to the end; while November,

up to the middle of the month, was characterised by light south wind and dull weather. Among the rarer visitors may be numbered the second Lincolnshire example of the Barred Warbler, the Arctic Bluethroat, Red-necked Phalarope, Spotted Redshank, Wood-Sandpiper, and Great Snipe, as well as such unusual migrants as the Wood-Wren, Grasshopper-Warbler, and Barn-Owl.

There are also some notable absentees, such as the Ring-Ouzel, Great Grey Shrike, Pied Woodpecker, and Wood-Pigeon. On the whole, however, the amount of visible migration was below the average of recent years.

Turdus viscivorus, Linn. Mistle-Thrush.—Appeared on the coast in great numbers, taking part in the "rush" of small birds of Oct. 4th and 5th; again numerous on 9th, and finally was still more abundant in the movement of Oct. 17th to 21st.

T. musicus, Linn. Song-Thrush.—A very small migration compared with that of 1898. A good many appeared in turnip and potato fields near the coast on Sept. 11th, and again in the hedges, with Redwings and Blackbirds, on Oct. 21st, 27th, and 30th; and a few were still present on Nov. 3rd.

T. iliacus, Linn. Redwing.—A very heavy immigration commencing with the "rush" of Oct. 4th to 9th in small numbers, but appearing in great abundance on that of Oct. 17th and following days, and lasting until about Nov. 10th.

T. pilaris, Linn. Fieldfare.—I saw a single bird in a hedge near the coast at North Cotes in October, but no more had appeared up to Nov. 15th, when I left Lincolnshire. On my return I found Fieldfares fairly numerous on Dec. 13th, and very large numbers appeared on Dec. 24th and 25th.

T. merula, Linn. Blackbird.—Several Blackbirds appeared in the neighbourhood of the coast on Oct. 5th, and a much larger flight on the 9th. Both these flights consisted of adult males and females in about equal numbers. On 17th and 18th another very large arrival took place, again consisting of adults of both sexes, accompanied, however, on the latter day by a few young cocks. On 21st scores of young black-billed cocks appeared with very few hens. Young cocks were still very abundant on 27th, with a good many old cocks and a few hens.



On 30th many cocks, old and young, but females were more numerous than on previous days. On Nov. 3rd swarms of Blackbirds, almost all females. Nov. 7th, again many young males, and on 10th young cocks abundant, with a few old cocks and hens. On the whole I believe the passage of Blackbirds was heavier than usual.

Saxicola œnanthe (Linn.). Wheatear.—Wheatears appeared very early, and I saw many along the sea-bank on July 29th. I saw no more until Aug. 23rd, when one or two appeared. On Sept. 1st and 2nd they were very numerous, and again on 15th. On Oct. 4th I noticed a single bird on the sea-bank, and on 5th three more stragglers appeared.

Pratincola rubetra (Linn.). Whinchat.—Numerous on turnip fields near the coast on Sept. 1st. On Sept. 11th and 20th, one seen each day.

P. rubicola (Linn.). Stonechat.—A single bird—a female—on a hedge in Thoresby Field on Sept. 25th.

Ruticilla phœnicurus (Linn.). Redstart.—A single bird near the coast on Sept. 13th. On Oct. 4th and 5th a good many in company with Redwings, Pied Flycatchers, Wrens, and many other small birds. This is an unusually late date for the passage of the Redstart.

Cyanecula suecica (Linn.). Arctic Bluethroat.—On Oct. 4th I shot a young female of this species near the sea-bank in the parish of Marshchapel. It is seven years since I last saw a Bluethroat on this coast.

Erithacus rubecula (Linn.). Robin.—A few Robins came in on Sept. 9th, but the first important immigration took place on Oct. 4th, and a somewhat smaller one between Oct. 17th and 21st, while a few stragglers remained until the 27th.

Sylvia cinerea (Bechst.). Whitethroat.—Many Whitethroats appeared on Aug. 23rd, with Hedge-Sparrows and Willow Wrens. Aug. 28th, several in the hedges, and from this date until Sept. 9th a few were always present; while on Oct. 4th I shot a single straggler.

S. curruca (Linn.). Lesser Whitethroat. — Always a scarce bird on migration. I shot one near the coast on Sept. 14th, and a second on Oct. 4th.

S. hortensis (Bechst.). Garden-Warbler. — I shot one on

some thorns near the coast at Tetney on Oct. 18th, an unusually late date.

S. nisoria (Bechst.). Barred Warbler.—On Oct. 17th I shot a young female of this species. It was in a thorn-hedge not far from the coast at Marshchapel. The weather had been fair and bright since the 15th, with light east wind, and white frost at night.

Regulus cristatus, R. L. Koch. Goldcrest. — The Goldcrest appeared in very small numbers this year. On Oct. 4th I saw a single bird on a hedge at North Cotes, and this bird remained about the same spot until the 13th. On the 17th and 18th Goldcrests were thinly scattered everywhere along the coast, though by no means numerous. By the 21st only three or four remained, and on 27th two only were seen.

Phylloscopus rufus (Bechst.). Chiffchaff.—I shot a Chiffchaff on the very unusual date of Nov. 10th, on a hedge close to the coast.

P. trochilus (Linn.). Willow-Wren. — A few Willow-Wrens appeared on the coast on Aug. 23rd, most of them frequenting the larger hedges. On Sept. 9th I shot an example of a small race of the Willow-Wren which occasionally occurs on migration.

P. sibilatrix (Bechst.). Wood-Wren.—I shot a Wood-Wren near the coast on Aug. 28th. This bird very rarely occurs on passage.

Acrocephalus phragmitis (Bechst.). Sedge-Warbler. — Last seen on Sept. 8th; one shot in a clover field near the sea.

Locustella naevia (Bodd.). Grasshopper-Warbler.—On Sept. 14th I shot one of these birds among the long grass in the bottom of a hedge near the coast. On 16th I saw another almost at the same spot, but failed to shoot it, as it was impossible to make it leave covert for more than a few feet at a time. I have never seen this species on migration before.

Accentor modularis (Linn.). Hedge-Sparrow.—The migration of this bird commenced just a month earlier than usual. A considerable number appeared on Aug. 23rd, but almost all left by the 28th. On Oct. 4th, and again on the 9th, large immigrations took place.

Parus major, Linn. Great Titmouse.—The passage of both the Great and Blue Titmouse proved quite a feature in the

migrations of the past autumn. This bird first appeared on Oct. 5th, and from that date until Nov. 10th was to be found daily in the trees and hedges near the coast in considerable numbers.

P. cæruleus, Linn. Blue Titmouse.—Like the last named, occurred in great numbers, generally in small parties of from two or three to half a dozen frequenting the hedges or the thorn-bushes on the drain sides. It appeared earlier than the Great Titmouse, two or three coming in on Sept. 14th. I saw no more until Oct. 4th, when they were very numerous, and from that date to Nov. 10th they were present in the coast district in great abundance.

P. palustris, Linn. Marsh-Titmouse.—I saw a Marsh Titmouse in a hedge by the roadside at Holton-le-Clay on Nov. 14th, and shot one in Fenby Wood on Dec. 28th.

Troglodytes parvulus, Koch. Wren.—A few Wrens came in on Oct. 4th, and their numbers had increased somewhat on the 5th. On the 9th they were very abundant everywhere near the coast; again on 21st a good many appeared, and the passage finished about the 27th.

Motacilla lugubris, Temm. Pied Wagtail.—Many young birds on grass-land near the coast on Sept. 2nd. Again many on Sept. 9th and 11th; on the latter date a few were old males. On 16th a few, all young birds; and on 20th many, both old and young. From this date no more appeared on the coast, but on Oct 11th at Wyham, and on 14th at Wold Newton, both on the top of the wolds, I observed numbers of Wagtails, both old and young, feeding among the sheep, folded on turnips.

M. melanope, Pall. Grey Wagtail.—A pair of Grey Wagtails appeared on Waith Beck on Sept. 24th; Oct. 4th, a single bird at one of the fish-ponds at Grainsby, and on 18th several on one of the marsh-drains near the coast.

M. raii (Bonap.). Yellow Wagtail.—One young bird on Aug. 9th. Several on Aug. 28th and Sept. 4th. Abundant on the 9th, and from this date they became gradually scarcer until the 22nd, after which I saw no more. All were young birds.

Anthus trivialis (Linn.). Tree-Pipit.—One shot in a hedge near the sea at North Cotes on Oct. 4th.

A. pratensis (Linn.). Meadow-Pipit.—I noticed many of these Pipits along the sea-bank on Aug. 28th, and again on

Sept. 2nd. On Sept. 4th their numbers had increased to hundreds everywhere near the coast, and the species continued very abundant until the 20th.

A. obscurus (Lath.). Rock-Pipit.—Two or three Rock-Pipits appeared on the foreshore at North Cotes on Sept. 22nd. A considerable immigration on Oct. 4th, and a still greater one on 17th.

Muscicapa atricapilla, Linn. Pied Flycatcher.—Three Pied Flycatchers came in with the "rush" of small birds on Oct. 4th—the only ones seen during the autumn.

M. grisola, Linn. Spotted Flycatcher.—The majority of these birds left about the second week of September, but I saw half a dozen in the garden at Grainsby on the 24th.

Hirundo rustica, Linn. Swallow.—Thousands roosting in the reed-beds on Madams Crike on Sept. 4th. Swallows became scarce about Oct. 9th, but I saw three or four flying over the village of Tetney on the 18th.

Chelidon urbica (Linn.). House-Martin.—A House-Martin flying about the house at Grainsby on Nov. 5th.

Ligurinus chloris (Linn.). Greenfinch.—A good many near the coast on Oct. 13th, and very abundant from the 17th to the 30th.

Carduelis elegans, Steph. Goldfinch.—Very scarce; one on the sea-bank on Nov. 10th.

Passer domesticus (Linn.). House-Sparrow.—Very large flocks in the hedges near the coast on Oct. 5th, and again on 21st.

Fringilla cœlebs, Linn. Chaffinch.—A large flock at Grainsby on Oct. 15th. On 17th many—apparently all males—about the sea-bank and neighbouring hedges.

F. montifringilla, Linn. Brambling.—One (a female) on a hedge near the sea on Oct. 4th. Two, both females, at Grainsby on Oct. 11th. A considerable number in a mixed flock of Linnets, Greenfinches, and Twites on Dec. 20th.

Linota cannabina (Linn.). Linnet.—Many on grass-land near the coast on Sept. 15th. Large mixed flocks of Linnets and Twites on the North Cotes foreshore on Oct. 9th and 18th.

L. flavirostris (Linn.). Twite.—Many small flocks along the

shore on Oct. 5th, and on 9th and 18th very abundant, associating with Linnets on the foreshore.

Emberiza citrinella, Linn. Yellowhammer. — Many small flocks in the vicinity of the coast on Dec. 20th.

E. schœniclus, Linn. Reed-Bunting. — One on a hedge near the sea-bank on Oct. 18th, and on 21st a good many, both on the hedgerows and among the weeds on the "fitties."

Plectrophenax nivalis (Linn.). Snow-Bunting. — A most insignificant migration; only two or three single young birds on the sands at Marshchapel on Nov. 3rd.

Sturnus vulgaris, Linn. Starling. — Huge flocks of Starlings on Tetney "fitties" and land adjoining on Oct. 4th, and again on 9th. On Oct. 17th thousands passing in from the sea to north-west until about 2.30 p.m. in long straggling flocks. On 21st an immense flock came in from the sea about half-past four in the afternoon, and passed inland to south-west. By this date there were millions of these birds on the coast marshes.

Garrulus glandarius (Linn.). Jay. — There was probably some immigration of Jays about the end of September, as on 28th of that month I noticed many flocks of these birds, some of them numbering over a dozen individuals, about the hedgerows at Grainsby. I have not permitted the destruction of Jays for many years, and they are now very abundant here, so that possibly these flocks were local birds. I have never met with the Jay actually on the coast.

Corvus monedula, Linn. Jackdaw. — A very slight immigration. On Oct. 21st I saw four Jackdaws among a flock of Rooks coming in from the sea, and going north-west, and on the 30th a few on grass-land near the coast.

C. corone, Linn. Carrion Crow. — On Sept. 13th a Carrion-Crow on North Cotes "fitties," and on 14th three in the same place. Very abundant in the winter; I saw over a hundred come to roost in Autby Wood in the evening of Dec. 29th.

C. cornix, Linn. Grey Crow. — First Grey Crow seen on Oct 3rd, on 9th two, and one each day on 11th and 13th. Many passing north-west over Tetney village on 16th. On 17th flocks of Grey Crows coming in from the sea, and going north-west until about 2.30 p.m.; afterwards single birds until sunset. On

21st a few coming in, and travelling north-west singly, or two or three together.

C. frugilegus, Linn. Rook.—A few coming in with Grey Crows, and going north-west on Oct. 17th. Oct. 21st, small parties coming in until about four o'clock. The morning was foggy, and the Rooks were only visible through occasional breaks in the mist; but the flocks appeared to be going south-west. In the afternoon the fog cleared, and all the Rooks went to north-west. On 30th a few coming in and going west. On Nov. 1st hundreds passing over Grainsby to west all day until dusk, and on 7th a few coming in until 2.30 p.m.

Alauda arvensis, Linn. Sky-Lark.—A very slight visible immigration. A few small flocks coming in on Oct. 9th, and going south-west until two o'clock. Again on 17th small parties coming in, some going north-west, others south-west. On 21st Larks were very abundant on the stubbles both inland and near the coast, and small flocks were going north-west, and about the same number on Nov. 7th. On Dec. 24th, 25th, and 27th straggling flocks were passing north-west over Grainsby in the morning, but on the last-named day a few of the flocks went south.

Cypselus apus (Linn.). Swift.—Several near the coast on Sept. 4th.

Alcedo ispida, Linn. Kingfisher.—Unusually numerous on the drains and sluices near the coast, particularly on Sept. 8th, 14th, and Oct. 18th. The first one was seen on Aug. 28th.

Cuculus canorus. Linn. Cuckoo.—Very few appeared on the coast, and all young birds. I saw one on Sept. 1st, two on 4th, and one on 6th. One of those seen on the 4th belonged to the red form.

Strix flammea, Linn. Barn-Owl.—On the evening of Oct. 1st I saw an example of this very unusual migrant near the coast at Tetney.

Asio otus (Linn.). Long-eared Owl.—I saw a Long-eared Owl perched in a low bush near the lifeboat-house at Donna Nook on Oct. 13th.

A. accipitrinus (Pall.). Short-eared Owl.—About the last week of August I saw, at a birdstuffer's shop in Grimsby, a freshly-skinned Owl of this species, which had been caught on

board ship about one hundred miles off the Humber. On Oct. 17th one among North Cotes sand-hills. Oct. 30th, one on the sea-bank, and on Nov. 7th one in a turnip field near the coast.

Buteo vulgaris, Leach. Common Buzzard.—On Oct. 14th a very dark coloured Buzzard passed over the wolds at Beesby at a great height.

B. lagopus. Rough-legged Buzzard. — On Dec. 24th one of these birds passed over me at Grainsby, almost within gun-shot.

Accipiter nisus (Linn.). Sparrow-Hawk.—A few young birds in the hedges and along the sea-bank at North Cotes on Sept. 22nd. On Oct. 17th one or two, and on 21st many Sparrow-Hawks along the coast. On Dec. 29th Sparrow-Hawks were exceedingly abundant; I saw over a dozen at Grainsby in about an hour in the morning, and many came in to roost in Autby Wood at night.

Falco peregrinus, Tunst. Peregrine.—On Dec. 29th a Peregrine flying over Fenby Wood in the morning, and another, or perhaps the same bird, in the afternoon. Dec. 30th, one at Grainsby.

F. æsalon, Tunst. Merlin.—A little cock Merlin in the cow marsh at Tetney on Oct. 16th, and a young female at Grainsby on Dec. 24th.

F. tinnunculus, Linn. Kestrel.—Two or three Kestrels about the sea-bank on July 29th, and a good many on Sept. 4th and 22nd; and two or three each day on Oct. 17th and 21st.

Ardea cinerea, Linn. Heron.—Several Herons, all immature birds, appeared on the creeks at Tetney on July 29th.

Anser brachyrhynchus, Baill. Pink-footed Goose.—First flocks seen on Oct. 4th. During the severe weather on Dec. 13th and 14th the coastguards at North Cotes reported many Grey Geese on the coast.

Anas boscas, Linn. Mallard.—Thousands of Ducks were seen going up the Humber by coastguards and others on Dec. 14th, soon after the commencement of severe weather.

Spatula clypeata (Linn.). Shoveler.—One shot at Tetney on Sept. 1st was probably a home-bred bird.

Nettion crecca (Linn.). Teal. — Not so numerous on the "crikes" at Tetney as usual. A few appeared on July 29th, and a good many on Aug. 16th.

Mareca penelope (Linn.). Wigeon. — One shot at Tetney on Sept. 1st.

Columba ænas, Linn. Stock-Dove. — Two small flocks at Grainsby on Nov. 4th and 5th. On 7th I shot a young bird close to the sea-bank at Tetney, and on Dec. 30th I shot four out of a flock of about one hundred of these little Pigeons.

Turtur communis, Selby. Turtle-Dove. — I shot a young Turtle-Dove from a hedge near the sea at North Cotes on Sept. 29th.

Crex pratensis, Bechst. Corn-Crake. — Last saw one in a turnip field at Cadeby on Oct. 11th.

Porzana maruetta (Leach). Spotted Crake. — On Oct. 4th I shot a Spotted Crake at Tetney.

Rallus aquaticus, Linn. Water-Rail. — First appeared near the coast on Oct. 27th, when I shot one at Tetney.

Charadrius pluvialis, Linn. Golden Plover. — On Oct. 4th I shot a couple of young birds—the first seen on North Cotes sands. Oct. 5th, several flocks of forty or fifty birds each on the sands. Very abundant on Oct. 9th; many flocks of from fifty to several hundred birds each on the sands and land near the sea. Again on 21st and 30th great numbers on the coast. On the latter day I killed eight out of one of the flocks, and found both old and young birds among them.

Squatarola helvetica (Linn.). Grey Plover. — A few on the coast on Sept. 2nd. On 14th a good many, all adults in full breeding dress. On Oct. 13th a great immigration of young birds all along the coast.

Vanellus vulgaris, Bechst. Peewit. — Very little visible migration, and Peewits appear less numerous in the district than usual. Small parties going west on Oct. 9th until about 2.30 p.m.; some large flocks on the coast with Golden Plover on the same day. Again, on Nov. 10th many flocks coming in, and going to north-west. On Dec. 11th—the second day of the hard weather—the gamekeepers reported large flocks of Peewits going south over Grainsby.

Streptilas interpres (Linn.). Turnstone. — A couple of young birds on North Cotes sands on Sept. 13th.

Hæmatopus ostralegus, Linn. Seapie. — A large flock appeared on Tetney Sands on Sept. 2nd.

Phalaropus hyperboreus (Linn.). Red-necked Phalarope.—A Red-necked Phalarope was netted by one of the Plover-catchers on Oct. 12th at North Cotes, and sent to me.

Scolopax rusticula, Linn. Woodcock.—The first flight came in on Oct. 19th, and another and apparently much larger flight on Nov. 10th. An unusually large number of Woodcocks were present in the coverts about Christmas, and it is probable that a third immigration took place about the beginning of the frost which commenced on Dec. 10th, as I shot one in Waith fen, a long way from any wood, on the 13th.

Gallinago major (Gmel.). Great Snipe.—One sent to me by one of the Plover-catchers, which he shot on Oct. 3rd close to the village of North Cotes.

G. caelestis (Frenz.). Common Snipe. — The first flight of migrating Snipes appeared on Oct. 30th, when I found many in the neighbourhood of the coast at Tetney. On Nov. 7th a second immigration took place, but on both occasions they were exceedingly wild, and I killed very few.

G. gallinula (Linn.). Jack-Snipe. — A couple of Jacks appeared on Sept. 29th, and a considerable number on Oct. 27th.

Tringa alpina, Linn. Dunlin.—A few on the sands on July 29th. Have been scarcer than usual all the season.

T. minuta, Leisl. Little Stint. — Very scarce; one caught by a Plover-catcher at North Cotes on Sept. 28th was the only one I saw during the autumn.

T. subarquata (Güld.). Curlew-Sandpiper.—I saw a party of four on the shore at Marshchapel on Sept. 18th.

T. canutus, Linn. Knot. — Scarce in the early part of the season. On Oct. 4th there were some large flocks on North Cotes sands, and on 17th thousands of Knot appeared.

Calidris arenaria (Linn.). Sanderling.—Scarce; three on the sands near Saltfleet on Sept. 2nd.

Machetes pugnax (Linn.). Ruff.—First seen on Aug. 16th, a single Ruff near Tetney Lock. On Sept. 11th a Reeve on a fresh-water creek near the coast, and on the 20th a Ruff on the sea-bank at high water.

Totanus hypoleucus (Linn.). Common Sandpiper. — A few appeared on July 29th, and were fairly numerous up to the middle of September on the sides of the marsh-drains. Last seen—a single bird—on Oct. 5th.

T. glareola (Gmel.). Wood-Sandpiper.—On July 29th I saw a Wood-Sandpiper on the side of Madams Crike, near Tetney Lock. It was very tame, and allowed me to watch it within ten yards.

T. ochropus (Linn.). Green Sandpiper.—First seen on July 29th, in company with the Wood-Sandpiper, but these birds were very wild, rising out of gunshot. Numerous on the marsh-drains throughout August and September.

T. fuscus (Linn.). Spotted Redshank.—One of the Plover-catchers sent me three immature Spotted Redshanks, caught by his son on Sept. 1st at Tetney on one of his Plover-pools. On Sept. 14th this same man sent me another—also a young bird—which he had caught on his Plover-decoy at North Cotes; and, finally, a fifth, caught at the same place on Sept. 28th. He told me that he believed all these birds were part of a flock of six which he had seen late in August.

T. canescens (Gmel.). Greenshank.—One or two on Tetney “fitties” on July 29th, a very early date. Last seen, a single bird on Sept. 16th.

Numenius arquata (Linn.). Curlew.—I saw two or three Curlews on July 29th on North Cotes sands. On Aug. 23rd they were numerous, and continued so through the autumn.

N. phæopus (Linn.). Whimbrel.—First seen on July 29th, and a few were present until the middle of September, but in unusually small numbers.

Hydrochelidon nigra (Linn.). Black Tern.—A young bird of this species was shot at North Cotes by one of the Plover-catchers, and sent to me about the middle of October.

Sterna macrura, Naum. Arctic Tern.—Terns were exceptionally scarce this autumn. On Sept. 2nd I saw a few small parties of this species at Saltfleet and Donna Nook.

Podiceps fluviatilis (Tunst.). Little Grebe.—A couple of young birds on North Cotes sluice on Oct. 13th. On 27th an old bird in breeding plumage on a fresh-water creek near the coast.

ON THE DISTRIBUTION OF SOME BIRDS OBSERVED IN IRELAND AND IN SWITZERLAND.

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THAT the large majority of birds are widely distributed over the face of the globe is a fact now well ascertained. Their migratory propensities, which seem to be the rule rather than the exception, account largely for their geographical distribution. But it does not necessarily follow from this that certain species are equally plentiful in different countries; for example, the Redstart is decidedly rare in Ireland, whereas in many parts of the Continent it is quite a plentiful bird. Even in the same country a bird may be common in one province, and unknown in another. Thus, in Kilkenny and Queen's County the Jay is often seen, whereas it is practically absent from Louth and Dublin.

These facts concerning distribution are highly important to those who may wish to determine the absolute rarity of birds, a matter which every collector should consider before attempting to diminish their numbers. A non-breeding casual migratory species, seldom occurring in the British Isles, but common and widely distributed in other countries, cannot in any sense be considered a *really rare bird*. It is only relatively so, and in the cause of science it seems quite allowable to capture such a species provided that the scientist wishes to advance his knowledge of ornithology. By such a procedure he will not materially lessen the numbers of the species, and moreover he will obtain reliable evidence of the occurrence of a *so-called rare native bird*. The present article has been written with the view of supporting this idea. The occurrences of different kinds of birds (as many as possible) inhabiting both Ireland and Switzerland are in the first place recorded. Their variation in numbers in the two countries (the question of relative rarity) is then compared. But in all cases one must not expect the numbers to sensibly vary.

Some birds are equally common to both countries. A brief notice of these will probably suffice.

It should be borne in mind that the observations set down in this paper were chiefly made during a few tours through the alpine scenery of Switzerland; hill, dale, and large inland lakes being the nature of the greater part of the country traversed. Hence the following list treats of land birds for the most part, such as those found in the orders of *Accipitres* and *Passeres*. By far the greater number of birds recorded belong to the latter order. Still, the presence of large inland lakes (Geneva, Lucerne, &c.) one would almost think should have afforded suitable "*natural habitat*" for some fresh-water aquatic birds belonging to the orders of *Limicolæ* and *Natatores*, such as the Common Sandpiper and Coot; and, indeed, the absence of these and others of the same class appears somewhat remarkable.*

As we should naturally expect, the habits of a given species found in Ireland differed but little from the same found in Switzerland. If anything, the continental birds on the whole appeared rather the tamer of the two. As in Ireland, so in Switzerland, the birds of the mountainous districts showed a more marked tendency to shyness than those frequenting the towns and the vicinity of human habitations.

The plumage of a species common to the two countries seemed practically identical. To this there are a few exceptions, which will be referred to when dealing with the bird in question.

In order to render the subject-matter of this article more complete, and to endeavour to add to its interest, the authors have deemed it advisable to *very briefly* refer to the *general geographical distribution* of each species mentioned, in addition to its occurrence in Switzerland and Ireland.

Finally, before drawing up this list of birds, it is important to mention that the observations were made during *short visits* to the Continent in the summers of 1897, 1898, 1899. Each visit only lasted three weeks; but, when added together, they extended over the greater parts of July, August, and September. For this reason it is obvious that the numbers of birds which were noticed were no doubt proportionately small. Instead of this, had the visits extended into one of longer duration, lasting continuously

* It is likely that both Coot and Waterhen were overlooked.

for three months, then a fuller avifauna of the Swiss birds would have been furnished. Inasmuch as all observations were made in summer, it was not possible to compare the relative differences in the numbers of the winter visitants common to the two countries.

Order ACCIPITRES.

Accipiter nisus, Linn. Sparrow-Hawk.*—Somewhat uncommon.† Was observed for the most part in the valley of Chamonix. Common throughout Ireland. In the Swiss form the stripes on the breast are more defined, and, according to M. Gerbe,‡ there is a local species found in Switzerland and in Germany (*A. major*) larger in size, and the bands on the feathers of the tail are darker and more numerous. Other minor differences also exist.

General distribution.—Common in every country in Europe, in many parts of Asia, China, East Africa, and India.

Milvus ictinus, Sav. Kite.—Three were noticed soaring over Lake Geneva on different occasions. They came under close observation, and, with the aid of a powerful binocular, their forked tails—a characteristic feature—could be distinguished. In this way the species was easily identified. Extremely rare in Ireland. According to the late A. G. More,§ it has only been observed five or six times. The specimen obtained by Sir R. Payne Gallwey|| seems as yet to be the only one known. This was shot in 1880–1881 on the Cashen river, in Kerry. The writer describes the bird as flying “in swooping and almost wing-motionless curves, the tail first slanted this way, then that, as it acted rudder to the bird’s flight.”

General distribution.—Common in most parts of Europe south of Norway to the Mediterranean. According to Yarrell,¶ the Kite does not breed north of lat. 61°. It occurs also in Egypt, Palestine, Algeria, and the Canaries.

* It was curious that the common Kestrel was not observed.

† In the following list it must be understood that the occurrence of the birds in Switzerland is noted in each case before their occurrence in Ireland.

‡ Revised edition of ‘Ornithologie Européenne’ of the late Dr. Degland.

§ ‘List of Irish Birds,’ 1890, p. 6.

|| ‘Fowler in Ireland,’ p. 307.

¶ ‘British Birds,’ vol. i. p. 96.

Buteo vulgaris, Leach. Common Buzzard. — Numerous in the pine forests of Lucerne, Chamonix, and Grindelwald. A Buzzard was constantly to be seen soaring over Lake Lucerne, rising to a great height, and then descending almost to the surface of the water, after the fashion of an Osprey when in search of fish. In Ireland the Buzzard has been rapidly decreasing of late years, and is now very rare. It formerly bred in Donegal, Londonderry, Antrim, and Down.* One was observed on June 4th, 1889, at Powerscourt Waterfall, Co. Wicklow, by Dr. C. J. Patten. Sir W. Jardine describes the Buzzard as "a fine accompaniment to the landscape, whether sylvan or wild and rocky."

General distribution. — Inhabits the greater part of the European continent. Breeds in Sweden as high north as lat. 66°. Plentiful in Palestine in winter. Occurs also in North Africa, and rarely in Egypt. The American Buzzard is a different species.

Asio accipitrinus, Pall. Short-eared Owl. — One was noticed in the valley of Grindelwald in July, 1897. On account of its occurring at this time of year it probably bred there. In Ireland this species is a regular *winter* visitor in limited numbers, migrating before the breeding season.

General distribution. — Widely distributed and migratory in its habits. At one season or another it frequents the whole of Europe and the greater part of Asia (China, India, Palestine, and Egypt), Algeria, and Morocco. It is also found in many parts of South America. In North America it is a summer visitant. Mr. Darwin met with it in the Falklands.

Order PASSERES.

Lanius collurio, Linn. Red-backed Shrike. — Many were observed in Lucerne, Basle, and neighbouring districts in Switzerland. In Basle this bird was often seen perched on the posts which supported the vines grown in the open air. It also frequently alighted on the telegraph-wires. In Ireland this species is excessively rare.† Only one specimen has been recorded, *viz.*

* "Report on the Breeding Range of Birds in Ireland" (Proc. Royal Irish Acad. 3rd series, vol. iii. No. 3, 1894), by R. J. Ussher.

† In parts of England and Wales it is a tolerably common summer visitor (see Saunders, 'Manual of British Birds,' 1899).

that shot on the 10th August, 1878, near Belfast (Zool. 1878, p. 437).

General distribution.*—In summer it is frequent throughout the Continent of Europe, except in the south-westerly region. In Spain it is rare. It breeds as high north as lat. 64°. It is also found in Palestine and North Africa, and in winter its migration extends to Natal and Cape Colony.

Muscicapa grisola, Linn. Spotted Flycatcher. — Common summer migrant in both Switzerland and Ireland.

General distribution. — Frequents the greater parts of the continents of Europe, Asia, and North Africa in summer. Visits India, Arabia, and South Africa in the winter.

Cinclus aquaticus, Bechst. Dipper. — Common, especially along the mountain rivulets of Davos Platz and Chamonix. The pale-backed subspecies (*C. albicollis*), which inhabits the Alps and Southern Europe, was not noticed. Common and generally distributed throughout Ireland.

General distribution.—*Cinclus aquaticus* is frequent in Central Europe, but in the northern parts its place is taken by the dark-breasted form (*C. melanogaster*). The Dipper also frequents many parts of Central Asia. Subject to continental variation.

Turdus viscivorus (Linn.). Mistle-Thrush. — Common in Switzerland, especially in Chamonix. Also common in Ireland.

General distribution.—Distributed over the European continent, breeding from north to south. Found in many parts of Asia as a resident, and in winter migrates to North India, Persia, and North Africa.

T. musicus, Linn. Song Thrush.—Common and widely distributed in both Switzerland and Ireland.

General distribution.—Resident over the greater part of the European and Asiatic continents. Many migrate in the winter to Northern Africa and Western Asia.

T. merula, Linn. Blackbird. — Seemed somewhat scarce in Switzerland in summer. Mostly observed at Interlaken. Common and resident in Ireland.

General distribution.—Like the Song Thrush, it is resident over the greater part of the European continent, but does not

* For details, see O. V. Aplin (Trans. Norf. and Nor. Nat. Soc. v. pp. 286 to 310).

extend far east in Asia. Breeds as high north as lat. 67° in Norway. Many migrate in the winter to southern countries like the Song-Thrush.

Erithacus rubecula, Linn. Redbreast; "Robin."—Common in Switzerland and in Ireland. Much wilder in the former country.

General distribution.—Resembles the former species in its breeding distribution, but not extending east of Russia. Many migrate in winter as far south as Central Africa and Western Asia.

Ruticilla phoenicurus, Linn. Redstart.—Common in most parts of Switzerland, approaching close to human habitation. Very rare in Ireland. Has been found breeding in counties of Wicklow* and Tyrone.† Frequently taken at lighthouses when migrating in spring and autumn.‡

General distribution.—In Europe from the North Cape to the south of the Continent, migrating in winter to the northern parts of Africa, Arabia, and Persia. The Asiatic form (*R. mesoleuca*) differs from the European species in that it possesses a white patch on the wing.

R. titys, Scop. Black Redstart.—Abundant in many parts of Switzerland, where it breeds. Rather rare, but regular winter visitor to Ireland.

General distribution.—Common in Germany and Southern Europe, where it is resident. Its eastern range extends to Asia Minor and Palestine; in winter to Nubja (Saunders).

Saxicola rubetra, Linn. Whinchat.—Plentiful in many parts of Switzerland, especially Chamonix, Davos Platz, Grindelwald, and Lucerne. In Ireland it occurs as a summer visitor, but rather scarce and local. According to Ussher§ it breeds in Donegal, Antrim, Down, Armagh, Tyrone, Fermanagh, Longford, Louth, Dublin,|| Kilkenny, Mayo, Sligo, and Leitrim.

General distribution.—Breeds over the greater part of the

* Benson on 'Irish Song Birds,' p. 53.

† R. J. Ussher, "Report on Breeding Range of Birds in Ireland" (Proc. Royal Irish Acad. 3rd series, vol. iii. No. 3).

‡ 'List of Irish Birds,' by A. G. More, p. 10.

§ "Report on Breeding Range of Birds in Ireland" (Proc. Royal Irish Acad. 3rd series, vol. iii. No. 3).

|| The authors have often observed this bird in Co. Dublin, and twice have secured specimens in nesting and adult plumage. These are in Dr. Patten's collection.

European continent as high north as lat. 70° in Scandinavia. It winters in Africa, Asia Minor, and Northern India. Occurs as far east as the Ural Mountains in Russia.

Sylvia rufa, Bodd. Greater Whitethroat.—Frequent in many parts of Switzerland, and common summer visitor to Ireland.

General distribution.—Over the greater part of Europe. Resident in Palestine (Saunders). Summer migrant in Asia Minor. Winters in North Africa, Egypt, Abyssinia, and Arabia. Extends farther east than the Whinchat.

S. atricapilla, Linn. Blackcap.—Common in many parts of Switzerland. Visits Ireland every summer, but in small numbers. Breeds regularly in Dublin, Wicklow, Kildare, and Queen's County (Ussher). This bird has been observed by Dr. Patten in the winter (February, 1890) at Bray, Co. Wicklow ('Naturalists' Gazette' for 1890).

General distribution.—Widely distributed over Europe, North Africa, and parts of Asia as a breeder. Migrates in winter to Abyssinia and the Red Sea.

Phylloscopus trochilus, Linn. Willow Warbler.—Common in Ireland and Switzerland as a summer visitor.

General distribution.—Over Europe and eastward to the Caucasus, where it breeds. Winters in lat. South of France, reaching as far as Cape Colony.

P. collybita (Vieill.). Chiffchaff.—Common in Switzerland and in Ireland in the summer.

General distribution.—Resembles that of the last species, but extends farther north in Europe. Widely distributed in winter in the Southern Hemisphere.

Regulus cristatus (Koch). Golden-crested Wren.—Common in Switzerland and Ireland.

General distribution.—Over Europe, South-west Asia, and Northern Africa. Extends east to the Ural Mountains.

Certhia familiaris, Linn. Tree Creeper.—Common in Switzerland and Ireland in woody districts.

General distribution.—In most parts of Europe, being abundant in the conifer woods of Norway. Reaches as far south as Japan and China. Occurs eastward as far as Siberia. The North American forms are somewhat different.

Parus major, Linn. Great Titmouse.—Common in Switzerland and Ireland.

General distribution.—Plentiful over the whole of Europe, North Africa, and South-western Asia.

P. ater, Linn. Coal Titmouse.—Generally distributed in Switzerland, Ireland, and elsewhere, like the last species. (For variations in foreign forms, see Saunders, 'British Birds,' 1899.)

P. cæruleus, Linn. Blue Titmouse.—Appeared somewhat scarce in Switzerland. Observed mostly at Berne. Common in Ireland.

General distribution.—Including the many continental varieties, it is widely distributed over Europe, parts of Asia, and North Africa.

P. palustris, Linn. Marsh-Titmouse.—One of the commonest species in Switzerland. Very rare in Ireland. (For its occurrence see 'List of Irish Birds,' 1890, by the late A. G. More.)

General distribution.—Resembles the last species, but rare in Southern Italy and Greece. Subject to continental variation.

Acredula caudata, Linn. Long-tailed Titmouse.—Common in Switzerland and in Ireland. The Swiss form appeared lighter in colour.

General distribution.—Including continental forms, it is widely distributed over Europe, Asia, and North Africa.

Motacilla lugubris (Temm.). Pied Wagtail.—Common in Switzerland and Ireland.

General distribution.—Almost restricted to the western portion of the European continent.

M. alba, Linn. White Wagtail.—Common in Switzerland. Very rare summer visitor in Ireland. For its occurrences in the latter country, see (a) 'List of Irish Birds,' by the late A. G. More, 1890; (b) Dublin Nat. Hist. Proc. vol. iii. p. 115; (c) 'Zoologist,' 1866; (d) Thompson ('Birds of Ireland'); (e) 'Irish Naturalist,' vols. vii. and viii.; (f) Howard Saunders, 'Manual,' p. 124. A fine specimen, recently obtained (April 27th, 1899) at Bartragh, Co. Mayo, by A. C. Kirkwood, is in the collection of Dr. Patten.

General distribution.—Over the whole of Europe and Northern Asia; also Asia Minor, Palestine, and North Africa.

M. sulphurea, Bechst. Grey Wagtail.—Tolerably frequent in Switzerland and Ireland, and resident in both countries.

General distribution.—Common and resident in the central

and southern portions of Europe. Rare in Northern Germany (Saunders). Breeds also in Northern Africa. Summer migrant in many parts of Asia, and winter visitor to South Africa and the Indo-Malayan Islands.

M. raii (Bonap.). Yellow Wagtail.—Observed in Switzerland on different occasions. Rather rare summer visitor to Ireland, and locally distributed. Breeds “in the basin of Lough Neagh both in Antrim and Armagh” (R. J. Ussher). In Dublin (E. Williams). In Galway (Lord Lilford, recorded by R. J. Ussher). Near Loughs Mask and Carra, in Mayo (R. Warren).

General distribution.—Regular summer visitor to Western Europe, *i.e.* west of Belgium. Extends south to West Africa. The Eastern Asiatic species is distinct.

Alauda arvensis, Linn. Sky-Lark.—Appeared rather scarce in Switzerland, but probably was overlooked. Was heard in full song in Chamonix, July, 1897. Common resident in Ireland.

General distribution.—Throughout Europe and parts of Asia in the summer, but in autumn moves southwards. Winters in the central and southern portions of Asia and Africa. Found also in the United States, Australia, and New Zealand (Saunders).

Emberiza citrinella (Linn.). Yellow Bunting.—Common and resident in Switzerland and Ireland.

General distribution.—Widely distributed in Temperate Europe as resident. Occurs in Asia Minor and Palestine. The bird found in the latter country is somewhat distinct.

Fringilla cœlebs, Linn. Chaffinch.—Abundant in Switzerland and Ireland as resident.

General distribution.—Occurs plentifully all the year round throughout Temperate Europe. Breeds also in the east and north-east of Asia, as well as Persia. Winters in many parts of Northern Africa. Foreign forms are subject to variation.

Passer montanus, Linn. Tree-Sparrow.—Observed at Lucerne in small numbers. Rare and local in Ireland, where it breeds. Unknown to the latter country prior to 1852 (Saunders). A young specimen from Crumlin, Co. Dublin,* is in Dr. Patten's collection. It was obtained on Aug. 4th, 1898. For the chief occurrences of this species in Ireland, see ‘List of Irish Birds,’

* Its breeding range in Co. Dublin is extending. Prior to 1898 it was only supposed to breed near Baldoyle and Raheny.

by the late A. G. More, p. 14; also H. M. Wallis in 'Zoologist,' 1886, p. 489. Apparently breeds only in the Co. Dublin (Ussher).

General distribution.—Distributed throughout Europe and the greater part of Asia. Has been obtained from North America as an importation.

P. domesticus, Linn. House-Sparrow.—Numerous in Switzerland and in Ireland. In Lucerne this bird was noticeably tame, especially about the cafés chantants, where it might be seen picking crumbs, &c., from under the tables at which the tourists were enjoying their repast.

General distribution.—Numerous throughout Europe and the greater part of Asia, and North, Western, and Central Africa. Plentiful in Australia, New Zealand, and the United States, where it has been introduced.

Carduelis elegans, Steph. Goldfinch.—Frequent and generally distributed throughout many parts of Switzerland and Ireland.

General distribution.—Breeds throughout Europe; rare in the north. Very abundant in Spain (Saunders). Also resident in many parts of North Africa. Winter visitor to Egypt and Persia.

Serinus hortulanus, Koch. Serin.—Was observed frequently on the Wengern Alp, Grindelwald: also at Chamonix and Davos Platz. Extremely rare in Ireland. One was obtained near Dublin on Jan. 2nd, 1893 (Saunders's 'British Birds,' 1899, p. 177). The Serin is in Switzerland one of the wildest of passerine birds, and therefore somewhat difficult to observe.

General distribution.—Found throughout the greater part of Central and Southern Europe, and on both sides of the Mediterranean. According to Saunders, it is resident and *extremely abundant* in Asia Minor. Visits in winter other parts of Western and South-western Asia. This species has been introduced into North America (United States).

Chrysomitris spinus, Linn. Siskin.—Frequent in many places in Switzerland. Not uncommon in Ireland, but rather locally distributed as a resident. According to Ussher* it breeds in

* "Report on the Breeding Range of Birds in Ireland" (Proc. Royal Irish Acad. 3rd series, vol. iii. No. 3, 1894).

Donegal, Down, Armagh, Fermanagh, Dublin, Wicklow, Wexford, Waterford, Cork ?, Kerry ?.

General distribution.—Resident throughout the greater part of Europe, migrating in winter across the Mediterranean to North Africa. Also found in Western and South-western Asia. In India a different species exists (*C. spinoides*).

Pyrrhula europæa (Vieill.). Bullfinch.—Common and resident in Switzerland and Ireland. The large form with the very brilliant red breast (*P. major*), which inhabits Northern and Eastern Europe, was noticed in Switzerland.

General distribution.—Throughout the greater part of Europe. Also wanders to North Africa and Western Asia.

Loxia curvirostra, Linn. Crossbill.—Observed in limited numbers in some of the pine forests of Switzerland. In Ireland it is rather rare and uncertain as a winter visitor. Locally distributed as a resident, breeding, or noticed in the breeding season, in the following counties :—Down, Armagh, Fermanagh, Westmeath, Meath, Wicklow, Kildare, Queen's Co., King's Co., Tipperary, Waterford, Cork, Kerry, Sligo (Ussher).*

General distribution.—Resident over the pine forests of Europe, North Africa, and Siberia. Winters in North China. Occurs also in Western Asia and North America.

Pica rustica, Scop. Magpie.—Common in Switzerland and Ireland.

General distribution.—Plentiful in Europe, Western and South-western Asia, extending to China and Japan. Found also in the northern portions of America and Africa.

Garrulus glandarius, Linn. Jay.—Abundant in Switzerland. Resident and local in Ireland. Breeds in King's Co., Queen's Co., Carlow, Kilkenny, Wexford, Tipperary, and North Waterford (Ussher). Like the English bird, the alpine Jay is poorer in colour than the same species found in Ireland.

General distribution.—Inhabits the wooded districts of the European continent. The Asiatic and North African forms differ from that found in Europe.

* For further information concerning this bird, see (a) Ussher on "The Crossbill," 'Irish Nat.' vol. i. p. 6; also (b) Thompson, 'Birds of Ireland'; (c) 'Zoologist,' 1889, p. 180.

Hirundo rustica, Linn. Swallow.—Frequently observed in Switzerland. Common summer visitor to Ireland.

General distribution.—Over Europe,* and the greater part of Asia and North Africa in summer, migrating to India as far east as Burma, and all over Africa in winter. This bird is subject to a variety of foreign representatives, especially those connecting the Old with the New World (American) forms (*vide* R. B. Sharpe's Cat. Birds Brit. Mus. vol. x.).

Chelidon urbana, Linn. House Martin.—Frequent in Switzerland. Common summer visitor to Ireland.

General distribution.—Much the same as the last species, but, according to Saunders, it seems to winter in Central Africa. (In Europe it is rare in the Basque Provinces.)

Order PICARIÆ.

Cypselus apus, Linn. Swift.—Common in Switzerland and in Ireland (except the west) in the summer.

General distribution.—Abundant in Europe in summer. Also found in Asia and North Africa at the same time of year. In these parts, however, there are racial differences. On the winter migration it visits India and South Africa. According to Saunders it has occurred at the Andaman Islands.

C. melba, Linn. Alpine Swift.—Observed in two distinct localities in Switzerland: (a) at a high latitude at Grindelwald; (b) in the town and valley of Lucerne. In the latter place many Alpine Swifts, in company with the common species, were observed flying round an old tower close to the town bridge over Lake of Lucerne. These birds often flew under the eaves of the building, disappearing for a few minutes, and then flying out again. They were evidently nesting there. Extremely rare in Ireland. Thompson ('Birds of Ireland') records three specimens. For occurrences see also 'List of Irish Birds,' by the late A. G. More, p. 17; and Saunders's 'Manual,' p. 263.

General distribution. — Frequents the high mountains of Central and Southern Europe in summer; also North Africa, West and South-west Asia. In winter it migrates to Central India (especially Ceylon), and as far as South Africa.

N.B.—This Swift can be distinguished from the common

* Breeds as high north as 70° N. lat. in Scandanavia.

species by its larger size, browner colour, and white breast and abdomen. When the two are not together the best test is the voice. In the Alpine Swift the note is a loud double twitter; in the common species it is a single screech.

Alcedo ispida, Linn. Kingfisher.—Only one was noticed, *viz.* at Lugano; but probably inhabits many other suitable localities in Switzerland. Resident and generally distributed in small numbers throughout Ireland.

General distribution. — Resident throughout Central and Southern Europe, also North Africa, where it also occurs as a winter visitor. The Western and South-western Asiatic types vary somewhat from the European birds.

Gecinns viridis, Linn. Green Woodpecker.—Rather common in different parts of Switzerland. To Ireland it is a very rare and accidental visitor. For its occurrences see the following:—(a) Thompson, vol. iii. Appendix, p. 441; (b) Watters, p. 97; 'Zoologist,' 1889, p. 145; (c) 'List of Irish Birds,' by the late A. G. More, p. 18; (d) Saunders's 'Manual of British Birds,' 1899, p. 273.

General distribution. — Distributed throughout Central and Southern Europe, as well as Western Asia.

Iynx torquilla, Linn. Wryneck.—Once observed at Geneva. Very rare in Ireland. For occurrences see (a) 'List of Irish Birds,' by the late A. G. More, p. 19; (b) 'Migration Report for 1886,' p. 155; (c) Saunders's 'Manual of British Birds,' 1899, p. 271.

General distribution.—In summer it is found over the greater parts of Europe and Asia, reaching as high as lat. N. 64°. In winter it visits Southern Asia and Central Africa.

Order COLUMBÆ.

Columba palumbus, Linn. Wood-Pigeon; "Ring-Dove."—Common in many parts of Switzerland. Resident and common in Ireland.

General distribution.—Over the European continent, North Africa, and West Asia, The birds from Northern Europe move southwards in winter.

Turtur communis, Selby. Turtle-Dove.—A few were seen about Central Switzerland (Lucerne and Grindelwald). Rare

summer visitor to Ireland, and locally distributed as a breeding species. Has probably nested in Down, Kerry, Wicklow, and Dublin (Ussher).

General distribution. — Over Europe, Western Asia, and North Africa. Most of the Asiatic representatives are distinct.

Order GAVIÆ.

Larus argentatus, Gmel. Herring-Gull. — A single example was observed on Lake Como. Resident and common in Ireland.

General distribution. — Widely distributed over the coast-land and seas of Europe and America.

Order HERODIONES.

Ciconia alba, Bechst. White Stork. — Five or six examples were observed in the open fields in the north-western parts of Switzerland during a tour from Basle to Lucerne. Excessively rare in Ireland. For its occurrences see (a) Thompson, 'Birds of Ireland'; (b) 'List of Irish Birds,' by the late A. G. More, p. 32; (c) 'Zoologist,' 1866, p. 524; (d) Saunders's 'Manual of British Birds,' 1899, p. 388.

General distribution. — Throughout the greater parts of Europe, Central and South-western Asia, and Northern Africa. Passes southwards in winter in large numbers through Egypt as far as Natal.

The following species, frequenting both Switzerland and Ireland, and widely distributed over the European continent, were probably overlooked, and so have not been included in the foregoing list:—Peregrine Falcon, Kestrel, Marsh-Harrier, Hen Harrier, Long-eared Owl, Barn-Owl, Hedge-Sparrow, Stonechat, Wheatear, Sedge-Warbler, Wren, Meadow-Pipit, Reed-Bunting, Greenfinch, Linnet, Starling, Chough, Rook, Jackdaw, Sand-Martin, Nightjar, Cuckoo, Waterhen, Water-Rail, Land-Rail, Coot, Common Heron.

List of a few birds of doubtful occurrence in Ireland observed in Switzerland.

Nuthatch. — Common in many parts.

Crested Titmouse.* — Observed in many parts, especially Grindelwald and Davos Platz.

Tree Pipit.—Common in many parts.

SUMMARY.

Mention has already been made in the introduction of this article on the *very brief reference* to the general distribution of each species. We must regard this theme as being dealt with in a mere outlined manner; indeed, the names of the individual countries in which the birds have been found have for the most part been omitted, and groups of countries taken together forming part of a continent have been designated as western, south-western, northern, &c., so and so. Example: Persia, Arabia, Asia Minor, and Palestine are referred to as South-western Asia; again, Morocco, Algeria, and Canary Isles as North Africa. This has been done for two purposes—firstly, to economise space; and, secondly, because much has already been written *fully* on the geographical distribution of birds. Hence standard works as Saunders's 'Manual' (1899), Yarrell's fourth edition of 'British Birds,' and the late Seebohm's works have been freely consulted on this subject, as time and opportunity do not permit of personal observations on birds being made in every distant land.

With regard to the personal observations made in Switzerland, it may be added that, although only a limited number of places were visited by the authors, nevertheless, as these were mostly far apart, some important and definite districts were explored. Indeed, a wide area of Switzerland was included in the investigation. Thus Davos Platz and many neighbouring districts may represent part of Eastern Switzerland; Como and Chamonix, Southern Switzerland; the districts round about Geneva as south-western; Basle, north-western; Schaffhausen, northern; while Lucerne, Berne, and Grindelwald may be considered as forming part of Central Switzerland.

Concerning the observations made in Ireland, it should be

* Often observed in company with the other common species of Titmice, Goldcrests, and Tree Creepers. The same sociable nature of the Titmice may be seen in Ireland.

noted that only in the case of birds *locally distributed* as breeders are the *counties* where they have nested recorded.

We may conclude by stating that in Southern Switzerland and Northern Italy a marked dearth of bird-life prevails. This may in part be accounted for. Hundreds of small passerine birds are killed off for the markets. In Como and other districts Greenfinches, Robins, &c., were seen in the market-places plucked and prepared for table use.

Some References to Birds observed in Switzerland.

(a) Aplin, O. V.—“Birds seen in Switzerland” (‘Zoologist,’ 1892, pp. 3-14).

(b) Benson, C. W. — “Ornithological Notes from Lake Lucerne” (‘Zoologist,’ 1893, p. 432); “The Birds of the Riffelalp” (1898, p. 506).

(c) Playne, H. C.—“Ornithological Notes from the Alps” (‘Zoologist,’ 1893, p. 308).

(d) Sclater, P. L.—“The Birds of the Riffelalp, Canton Valais, Switzerland” (‘Zoologist,’ 1898, pp. 474-76).

NATURAL HISTORY NOTES FROM YORKSHIRE FOR 1899.

BY OXLEY GRABHAM, M.A., M.B.O.U.

THE nesting season of the year 1899 will ever be a red letter one in my calendar on account of the excellent series of photographs of nests and eggs, birds on their nests, birds feeding their young, &c., many of which are unique, that we—my friends Mr. T. A. Metcalfe and Captain H. Moore—were able to obtain. It was a bright sunny season, admirable as far as the light was concerned, and warm enough to be perfectly pleasant when we were lying up in water, or hiding for hours in the heather or gorse, for a shy bird to come back on to her nest. During the month of January many Duck were on inland flood water, but they were very bad to approach in a punt. Slavonian Grebes were about in some numbers. I had several Pipistrelle Bats and a sandy-coloured Mole brought to me. February was fine. Rooks and Herons were busy building by the 18th; a piebald Mole was caught near Knaresborough, but most unfortunately was thrown away before I heard about it. I have been trying to secure a piebald and a spotted example for years. Many Little Grebes about. The latter end of March was very cold and stormy. The pair of Rooks from Mr. Kitching's rookery at Heworth, that have built in a kind of cage just below the weathercock on the top of Heworth Church spire, 120 ft. from the ground, every year since 1887, have at last completed their nest after many failures. I saw a magnificent old male Heron that had unfortunately been trapped on a well-known Trout stream; he had been so often in the traps and escaped that he had not a whole toe left. His long crest-plumes measured nine inches.

Very early in April Long-eared Owls and Tawny Owls were sitting. On the 7th Metcalfe and I tried hard to get a photograph of the latter as she flew off her four eggs, which were in a hollow tree on a "scarr" side at the edge of a moor. There

were two holes, and she always came out of the left-hand one; so we crawled up the hill-side, amidst the mud and stones—Metcalf with the camera, and myself with a long hazel stick to tap the tree with—but she must have been on the look-out, for just as we got into position, and I was about to tap the tree, out she came from the right-hand hole, and so disappointed us. I found a Wild Duck's nest (Mallard) containing nineteen eggs. On the 25th of the month I saw the first Swallow, and heard the first Corncrake. The Cuckoo I did not hear till the 28th, on which date I found a Sky-Lark's nest with three eggs. Metcalfe got a lovely photo of a cock Lapwing, with crest erected, walking up to the nest.

On April 2nd, at 10.30 (Easter Sunday), a Noctule, or Great Bat, was hawking about in the sunshine over my garden.

MAY.

On May 1st a fine male Dotterel flew against the telegraph-wires at Kilnsea.

3rd.—Found two Woodcocks' nests, four eggs in each just hatching. Several pairs breed in this wood, and sit so close that if one wants to move them they have to be poked off the nest with a stick. They harmonize so beautifully with the surrounding dead leaves and grass that they are most difficult to detect. One was a much more golden-coloured bird than the other.

6th.—Moore and I found several Redshanks' nests, and eight Snipes'. Working with sixty feet of pneumatic tubing, Moore got a beautiful photograph of a Snipe on her nest. We found several Wild Ducks' nests, a Teal's, and a Shoveler's; there were four pairs of the latter birds in this locality, thanks to the protection now afforded them. The nests are most carefully concealed in thick tussocks, and have a regular run in, a foot or more in length, under the grass, from the place where the birds alight. When lying down in cover we had two drakes, looking lovely in the sunshine, fly within twenty yards of us. Several of the Redshank's eggs had been destroyed by Carrion Crows. Heard the Grasshopper Warbler, and saw several Adders.

9th.—Dug out a nest of four young Moles, about half-grown.

16th.—Green Woodpecker's nest containing two eggs; Coal Tit's, containing twelve eggs, well covered up; all the Tits

cover their eggs. Put up a Nightjar, which flew into a Scotch fir, and squatted, as they always do, lengthwise along a bough.

17th.—Found a Hawfinch's nest with eggs. Waterhen's with young on the top of a reed-fence five feet from the ground.

22nd.—Several Tree-Sparrows' nests in an old orchard. Long-eared Owl's with young in an old Magpie's nest.

27th.—A fine Allis Shad, weighing 6 lb. 2 oz., was brought to me. It had been caught in a Salmon-net not far from York. These fish rarely come up the Derwent so far nowadays.

28th.—Young Magpies out of the nest. In some of the market-gardens about here they do damage to the strawberry-beds, eating the fruit just before it gets ripe.

29th.—Metcalf and I found several Reed Bunting's, Lark's, Meadow Pipit's, and Whinchat's nests. It has been asserted in the pages of 'The Zoologist' that the latter bird is not double-brooded, but it is undoubtedly so here. The customs and habits of birds differ in different localities. Nearly all the Sky-Larks' nests contained three eggs. I look upon this as the usual clutch in Yorkshire; often there are four, but very rarely indeed five.

31st.—Found eggs of the Black-headed Gull. This colony, almost our last in the county, is, I am glad to say, holding its own, thanks to the protection afforded by the owner of the estate. It used to be ruthlessly harried, the eggs taken regularly, and it is a wonder that it has survived. The Wild Birds Protection Act is very often a mere farce, and were it not that private enterprise frequently steps in, it would be a complete failure. Moore got a photo of a Redshank on her nest. The camera was most carefully covered up, and he was working with a hundred yards of fishing-line tied to the trigger, and hiding behind a clump of gorse; but he had to wait five hours before she came back, and then he got a shot at her. A Cuckoo's egg, ordinary type, much incubated, in a Hedge-Sparrow's nest.

JUNE.

1st.—An old Rook, well powdered with white on the breast and back, got at Cottingwith.

3rd.—A fine old cock Crossbill, caught in a Magpie-trap at Thornton-dale, was brought to me by Mr. R. Hill, which I stuffed.

6th.—Moore and I went to photograph the Black-headed Gulls on their nests, and were most successful. I never thought they would face the camera; as the marsh took us up nearly to our middles, and we had to lash sticks on to the tripod, leaving the camera several feet above the water; then we screened it with green boughs of birch, and worked with one hundred yards of fine Trout-line. We got some beauties.

8th.—Moore tried to photograph a Turtle-Dove on her nest, but, though he waited five hours for the bird to come back, and the camera was so well concealed that three boys going to bathe passed within a couple of yards of it, and never noticed it, yet the bird would not return. They are most difficult birds to photograph on the nest.

10th.—Metcalf got three lovely photographs of a Common Sandpiper on her nest, in three different positions.

12th.—Went with Moore to photograph the nest and eggs of the Great Crested Grebe. I am glad to say these birds have increased considerably. If only we had had another ten feet of pneumatic tubing we should have got the old bird on the nest. We had the keeper up a tree ready to whistle to us when she settled, and she came close up several times; but most unfortunately she could just see our heads above a bank, where we were lying with our legs in the water. We were miles from home, and had to get back that night; and so we failed through want of a few feet of tubing. Found a Grasshopper-Warbler's nest with young.

19th.—Moore and I made a day's journey to get a Reed Warbler on her nest. Were most successful. Got her in four different positions coming on to the nest. I believe these, like the Redshank and Lapwing, are unique. Found several nests; some just finished, some with four fresh eggs, some with hard-set eggs. Also Moore got a very pretty photo of a Pheasant on her nest, using a long-focus lens. Saw a pair of Tufted Ducks, but had no time to look for the nest.

23rd.—Went down into Holderness for a night to enquire into the ruthless destruction that has been going on amongst our last remaining colony of Lesser Terns. While the watcher was on, appointed by the County Council, the birds increased in number; but now the trippers, who come over by steamer from

Grimsby, work sad havoc amongst them. One man alone took thirty-eight eggs back with him. The lighthousemen and the local policeman do what they can, but unless a proper watcher is again put on, as he most certainly ought to be, the birds are doomed. I found them so shy that they keep high up in the air, leaving their eggs to the heat of the sun and sand during the day-time, and only returning to them at dusk, when their enemies have departed. It is really iniquitous that our last remaining colony in the county of these pretty little birds should be so harried, and strong measures ought to be taken at once to ensure their breeding in peace. Was very glad to find a Shelduck sitting hard in a Rabbit-burrow on the sand-hills. Great numbers of Corn-Buntings about.

30th.—Metcalfé got a splendid photograph of a Golden Plover on her nest.

JULY.

1st.—A fine Trout caught at Thorntondale, weighing $2\frac{1}{2}$ lb.

10th.—Moore and I went to take a Nightjar on her eggs, which were just upon hatching. Working with sixty feet of pneumatic tubing, we got six good shots at her in various positions in a little over an hour; then we left her in peace. The difficulty was to keep her off the eggs. She was back again after each changing of the plates in a very short time. I wish someone would invent a method of changing plates without the operator having to leave cover—as, for instance, on pulling a string, the exposed plate to slip down into a compartment, and a new one pushed forward into position by a spring, or something of that sort.

11th.—Saw a curiously marked Fox-cub, having three large white stockings (one hind leg and both fore legs), and a large white patch on the back of the head, the size of the palm of a man's hand. Had a live Hawfinch brought to me that had been caught eating peas. I am sorry to say that many get shot in gardens owing to this habit.

13th.—Heavy storm; some lumps of ice fell as big as Black-bird's eggs, doing a great amount of damage.

15th.—Saw a curious Jackdaw with cinnamon-coloured wings.

19th.—Found a Little Grebe's nest containing three eggs. The nest was made of the following plants:—(1) *Sparganium*

ramosum, branched bur-reed; (2) *Potamogeton rufescens*, red pondweed; (3) *P. densus*, close-leaved pondweed; (4) *Anacharis alsinastrium*, water-thyme; (5) *Sium angustifolium*, water-parsnip; (6) *Hippuris vulgaris*, marestail; (7) *Equisetum arvense*, barren stem of common horsetail; (8) *Fontinalis antipyretica*, great water-moss. These were most kindly identified for me by Mr. M. B. Slater, F.L.S., of Malton.

21st.—Stuffed a Whiskered Bat.

24th.—Lying up in cover at dusk with a friend, we had seven Badgers, four old and three young, playing about within forty yards of us. (See the 'Field,' Feb. 3rd, 1900, for full account of the Badger in Yorkshire.) Would have given much to have been able to photograph them, but the light was gone for this purpose.

AUGUST.

August was a very hot month. Grouse have done well on nearly all the Yorkshire moors, and the young birds are fine and strong on the wing. An Osprey was shot on the 29th near Filey. Two young Dotterels at Easington, Holderness, on the 22nd.

SEPTEMBER.

September was also very hot. Partridges are plentiful. Over a small farm I and a friend shot eighteen brace; but here where we used to get fifteen or twenty Hares in a day fifteen years ago, now we never see one. I was over at Flamborough for a few days, and far out at sea saw many Skuas, mostly Arctic Skuas. An immature Sabine's Gull was shot here at the end of the month. A Great Snipe was obtained at Thorntondale, and another at Beverley, and near the latter place also a fine young Black-tailed Godwit, and a Greenshank. Mr. Stuart, the well-known birdstuffer of that town, tells me that a Wood Sandpiper was shot at Aike Beck End, on the river Hull, at the beginning of the month. Several Black Terns were observed off Bridlington, and some were shot. The large spring migration of these birds that has been noticed near Hemsworth for the last few years was not observed this year.

OCTOBER.

When Pheasant-shooting on the 2nd put up a Landrail. A fine Honey Buzzard was obtained near Beverley. I regret deeply

that another fine Osprey was shot near Scarborough. An archangel would have no chance in these days. Common Buzzard, Little Gull, Sandwich Tern, and Pomatorhine Skua were obtained at Bridlington. On the 14th a beautiful white Weasel was shot at Whixley by Mr. H. Pexton; it had normal coloured eyes, and was of a very pure white. These varieties of the Weasel are very scarce; this is only the second that I have seen. Mr. Allen, the well-known York taxidermist, showed me a young Rat, which cannot have been more than six weeks old, in which the upper incisors had either been broken completely away, or had never been; but the lower ones had grown and curled to the length of nearly two inches—a remarkably rapid growth. Had a white Mole sent to me, which I stuffed. Was away at the Lincolnshire flight-nets at the end of the month.

NOVEMBER.

A Gray Phalarope got at the Teesmouth, Nov. 19th, shot with a pistol. A Red-necked Phalarope obtained at Easington, Holderness, on the 8th. Several Whooper Swans in Bridlington Bay. Green Sandpipers about. In the middle of the month I was down on the Humber. At a certain spot there were great numbers of our commonest Wild Goose—the Pink-footed. I saw one huge mass of them, in which there cannot have been much fewer than a thousand birds; they arrive early in September, and remain throughout the winter. About 8 o'clock every morning, making a great noise, long skeins of them fly over North Cave Vicarage, where my friend the Rev. W. M. Tomlinson lives, on their way to feed on the stubbles, &c., on the wolds. One morning, with his Rook-rifle, Tomlinson fired at the leading bird, which was a great height up, and a big field's distance from the garden. He hit the third bird, and down it came. We had it in a pie, and excellent it was. I preserved the skin for him, as a memento of a wonderful shot. In such mild open weather we were quite unable to get near the birds on the Humber with a punt and big gun. On the 25th, when Pheasant shooting, I was surprised to see a large Frog hopping about in the middle of a wood as merrily as if it were June. Saw two Woodcock.

DECEMBER.

During December we had some very severe weather. Mr.

Moody, falconer to Mr. W. H. St. Quintin, of Scampston, saw several Bean Geese at Lowthorpe, and about fifty Whooper Swans at Scampston. Two Bewick's Swans were obtained at Leyburn, and a Brent Goose on the Swale, near Thirsk. A wild Gadwall, a very scarce Duck in the county, was obtained near Scampston. I am very sorry to have to record the slaughter of five Bitterns—two near Scarborough, one near Beverley, one at Easington, Holderness, and one at Lowthorpe. Several Little Auks were got on the coast, and one was put out of a hedge-bottom and caught by a Dog about three miles from York. Towards the end of the month vast numbers of Duck were on the Humber, many flying actually into the village of Easington, in which district one man alone shot thirty to his own gun in a single day. Many Duck also came inland, and great quantities of Dunlin within ten miles of York. A wild Peregrine Falcon was observed near Scampston feeding on a Mistle-Thrush.

I cannot close these notes without referring to the very great loss all ornithologists have sustained, and especially we in Yorkshire, by the all too early deaths of Mr. John Cordeaux and Mr. H. Bendelack Hewetson during this year. They were both personal friends of mine, and both took the greatest interest in all that pertained to the bird-life of the county. Many a ramble have I had with them both with gun and field-glass in the most favoured bird resorts of the county which they both loved so well; and it seems strange now, when I visit these places, not to hear their cheery voices, and to be told by them all the latest bird news. Well, we must all come to it sooner or later, and we shall do well if, like them, we leave a few footprints behind us, however small, before we ourselves are summoned to join them in the Happy Hunting Grounds.

NOTES AND QUERIES.

AVES.

Curious Partnership of Hedge-Sparrow and Blackbird in a Nest.—On April 13th this year a half-finished nest was found in a rhododendron in my grounds, the character and materials of which gave one the idea of it being a Hedge-Sparrow's (*Accentor modularis*), though from its size, and from the presence of large twigs and grasses, it seemed very doubtful that it could be the work of one. The nest steadily grew in size, and partook more and more of the character of a Blackbird's (*Turdus merula*), until in due course it was finished, and on April 19th it was found to possess its first egg—a Hedge-Sparrow's. On the 20th, when looked at next, the nest contained two Hedge-Sparrow's eggs and one Blackbird's. On the 21st the numbers had increased by one more egg of each kind, and on the 22nd the score stood at four Hedge-Sparrow's and three Blackbird's. The following day the Blackbird had brought the score up level, and begun to sit, but the weight of the hen Blackbird proved too much for the Hedge-Sparrow's eggs, and when the nest was looked at again on the 24th one of the four Hedge-Sparrow's eggs was crushed to pieces, and another badly cracked. The nest was then taken so as to preserve the production of such an ill-assorted couple of nest-builders. — W. FITZHERBERT-BROCKHOLES (Claughton-on-Brock, Garstang, Lancashire).

Pied Flycatcher in Somersetshire.—On the morning of April 27th I saw a male Pied Flycatcher (*Muscicapa atricapilla*) in my father's garden, Weston-super-Mare. The bird was very tame, and was probably resting on its way to its breeding haunts in Wales. This species appears to be rare in Somerset, and I only know of two records of its former occurrence in the county, namely, one killed near Taunton some years prior to 1869, as recorded in Mr. Cecil Smith's 'The Birds of Somersetshire'; and a record, noticed near Wells in the spring of 1870 (*vide* 'The Birds of Devon,' by D'Urban and Matthew, p. 53). It has doubtless been noticed more than once since 1870, but its visits to the county are evidently irregular, and probably accidental. On April 25th, 1897, I saw a male bird of this species near Gidleigh, North Devon, in which county the bird appears to be nearly as rare as it is in Somersetshire. Last summer I came across several pairs of Pied Flycatchers in a certain locality in Herefordshire,

where I found one nest on May 31st containing seven eggs. As far as I know, there are not many instances on record of its breeding in this county.—F. L. BLATHWAYT (Saltaire, Weston-super-Mare).

Lateness in Appearance of the Summer Migrants.—The following experience is unique in my recollection, and may be worth recording. Having failed up to April 4th to discover a single summer migrant of any species, I determined to spend the morning of the 10th in an elaborate search. It was fine and, on the whole, warm, and the country was extremely beautiful. I rambled about for three hours among woods and meadows, and along the banks of our stream, searching every spot which I have ever known to be frequented by Chiffchaffs on their first arrival, but without success. By this time we may usually expect to see three or four other species, though the dates of arrival in this upland district are seldom very early; but neither Blackcap, Redstart, or Tree Pipit were to be seen. I saw a small flock of Meadow Pipits, a species which *leaves* us for the summer. Starlings are still in large packs, though many, of course, are breeding; Lapwings are only just beginning their nests. The hedges are as black as in the winter, and I do not see the flies about them which accompany the opening of the leaf. Under such circumstances one can hardly expect the summer birds; but it would be interesting to know where they are, and what doing.—W. WARDE FOWLER (Kingham, Chipping Norton).

Observations on Birds during the exceptional severe Spring in Aberdeen.—Towards the end of March there was an unusual tameness of those birds frequenting the neighbourhood of farm-buildings, which indicated a continuance of severe weather at a later date of the year than is usual. While the general variety made their appearance at the late date, and were very tame, one bird which appears during snowstorms earlier in the year, the Snow Bunting (*Plectrophenax nivalis*), was not observed, except by a few stragglers. While the weather has been severe and the snow prolonged, there have not been many birds destroyed by starvation. Lapwings have evidently not been much disturbed, although there has been repetitions of severe frosts since they arrived. Partridges have been put to considerable straits, if we may judge by their tameness. Their haunts have been more closely covered with snow than is at all usual, and we find a wintery stillness following bird-life well into the spring of the year, when we are accustomed to hear melodies from many throats. Is this a sequel to the singing of the Sky-Lark in October of 1899, and does the cold snow-clad ground delay the melodies of this great songster? Pairing, which always accompanies an early spring, has also been retarded by the struggle for existence, packing having replaced the usual pairing.

season of this year ; so that there will be no danger to reproduction through too early nesting, which sometimes is a risk when cold weather sets in later in the year. A Robin, which may be reasonably supposed to have made my stable its shelter up to this its tenth winter, was crushed by a horse a week or two ago ; it was acquainted with all the customs of the place. One at least appeared in the autumn that the stable was first in use, returning every following year, until its peculiar habits drew attention to it.—W. WILSON (Alford, N.B.).

Notes from Norfolk.—Fritton Decoy. Mr. Patterson (*ante*, p. 160) gives the catch of fowl in Sir Savile Crossley's decoy at Fritton for the season 1887–8. As that season was described by the decoyman as a bad one, "not many fowl on the decoy, plenty of Wigeon after the 1st March," which, as usual, were too late to add to the return, perhaps readers may like to know what was done in the past season, which in the months of December, January, and part of February was a very favourable one. I therefore send the following return :—

	Duck.	Teal.	Wigeon.	Pintail.
1899.				
October	67	—	—	—
November	56	4	1	—
December	1529	13	2	—
1900.				
January	561	—	—	—
February	472	4	10	2
March	—	—	—	—
Total, 2721	2685	21	13	2

The average take for the past thirty-eight seasons has been 989. It has often been said that perfect seclusion is an absolute requisite for the successful working of a decoy. In this instance, although the pipes and the adjacent water are kept perfectly quiet, a high road runs at a very short distance from the decoy, and the Ducks may be seen on the water from passing vehicles. Little inconvenience is experienced from this, as the fowl soon become accustomed to such sights, and it is only sudden or strange sights or sounds which cause alarm. Very few Teal are taken here now, and only an occasional Wigeon, as the decoy is not worked after the end of February, which is too early for the spring migration of these birds. The only other fowl are a few Pintails, and now and then a Shoveler, Goosander, or Coot.—THOMAS SOUTHWELL (Norwich).

Nesting Notes.—Mr. Aplin is quite correct in noting (*ante*, p. 143) my omission of the Robin from the list of birds which have used nesting-boxes

here, but we find old kettles, water-cans, &c., possess the same attractions for this species that boxes have for the Tits and Nuthatches. Several of our nesting-boxes have had the entrance-holes enlarged by Starlings, which seem to be able to peck away the wood from an old weather-beaten box without difficulty. This year, for the first time, we have had an old cask occupied by a pair of Tawny Owls, which had on March 27th four eggs laid on the remains of a Starling's nest.—JULIAN G. TUCK (Tostock Rectory, Bury St. Edmunds, Suffolk).

AVICULTURAL NOTES.

Cormorant in Captivity.—The historic Cormorant of Montagu has made interesting reading for generations. The following notes on one, "Joey," now in my possession, may not record anything so striking as the tameness and intelligence displayed by that naturalist's bird, but my example has been nevertheless interesting. He was brought to me from sea by a smacksman on March 22nd. After incarceration in an old hamper for some days, the bird exhibited his delight on being turned into a netted enclosure by mounting the rockwork, and immediately putting his plumage into shape by shaking his wings, and by the use of his mandibles. In two days he learnt to recognize his fish-basket, and had already, after a day's fasting, become adroit at catching the fish and fish-heads thrown to him. On March 28th, after receiving five Whittings, the last leaving its tail out of the corner of his mouth, he in a hour's time made room for two more. On April 18th, for his breakfast, he devoured three good-sized Whittings, one Viviparous Blenny, one Herring, one Flounder. Not yet satisfied, he accepted an 18 in. Conger-Eel. This vanished, save for three or four inches of the tail-end, which greatly annoyed him by refusing to be drawn or shaken down; at length, by flapping his wings and stretching his body to the utmost, it was lost sight of. Five minutes afterwards he seized a Flounder, and made room for it. The bird has not attempted to drink or even look at water, although, after feeding and a short nap, he anoints his plumage by a free manipulation of the oil-glands. After swallowing fish, drops of water drip from his mandibles. It is seldom that undigested bones are cast up, these few being usually those of large Plaice-heads that have been chopped in order to reduce them to a convenient size for swallowing. The bird has become tame, and salutes me with curious trumpeting notes, accompanying them with a profound salaam; and, although he allows me to stroke his back with a stick or brush, is ever on the alert to seize a finger if possible.—A. PATTERSON (Ibis House, Great Yarmouth).

PISCES.

Notes from Great Yarmouth. — Fishes rare or curious have been sparsely met with in local waters during the past six months. The only records of exceptional interest, beyond the great takes of Herrings of last fishing season, were a white Sole (*Solea vulgaris*), on Sept. 19th, 1899; one or two Anchovies (*Engraulis encrasicolus*) in October, from the drift-nets; a Porbeagle (*Lamna cornubica*), our locally commonest Shark; and a Sturgeon of the variety *Accipenser latirostris*, which measured 4 ft., on or about Nov. 23rd. A 10 in. Lemon Sole (*Solea lascaris*) was brought me on Jan. 13th of the present year, and on the 16th an albino Sole, measuring 11½ in. Only a very narrow ring of the normal colouring encircled the eyes, and the slightest tinge of pink was observable on the fins. It was forwarded to the Cambridge Zoological Museum. A Plaice (*Pleuronectes platessa*), which was all white with the exception of the head and ventral fins, came to hand early in March. The first example of the Planer's Lamprey (*Petromyzon branchialis*) that I have been fortunate in identifying as locally occurring, I discovered on a heap of seaweed washed up at the harbour's mouth on April 10th. It measured 4½ in. in length, and was big in spawn; the ova, indeed, oozed from it. In the Norfolk and Norwich Naturalists' 'Transactions,' it is recorded as occurring at Keswick, where it is described as being "numerous in ditches containing small springs, to which this species appears to be attracted." The colour was dull green, relieved underneath by yellowish tints. On April 20th a faded example, long kept in ice, of the Ballan Wrasse (*Labrus maculatus*) was brought me from a trawler; it had undoubtedly been taken in a trawl-net "nor'ard of the Dogger," and is scarcely entitled to a place in the local list; the species has, however, been identified already at Yarmouth. — A. PATTERSON (Ibis House, Great Yarmouth).

NOTICES OF NEW BOOKS.

A Treatise on Zoology. Edited by E. RAY LANKESTER, M.A., LL.D., F.R.S., &c. Part III. The Echinoderma by F. A. BATHER, M.A., assisted by J. W. GREGORY, D.Sc., and E. S. GOODRICH, M.A. Adam and Charles Black.

WE have during the last few years drawn the attention of our readers to several volumes of the 'Cambridge Natural History.' We now invite their perusal of the first volume issued by the sister University. For this is really an Oxford publication; and, as the editor states in his preface, "the authors are, for the most part, graduates of the University of Oxford, though it may not be possible to maintain this limitation in future sections of the work." "The work is addressed to the serious student of zoology," and as such must be taken and appreciated. We seem to be approaching once more the high water-mark of technical zoology. These pages have distinctly the imprimatur of the editor, and may be accepted as conveying information that is full, recent, and reliable. Prof. Ray Lankester has very thoroughly identified himself with the volumes, and seems to have accepted a complete responsibility as editor. Mr. Bather has undertaken the greater part of the work; Dr. Gregory has contributed the chapter on the Stellerioidea and Echinoidea; that on the Holothurioidea is from the pen of Mr. Goodrich.

It is to be hoped that this volume will circulate beyond the arena of even the serious student, if that term is to bear a restricted significance. The purely British zoologist is a recruit from many non-academical centres: he is often a good observer, with little technical knowledge; his tastes are frequently bionomical rather than widely biological; his knowledge of the living habits of an animal are generally in an inverse ratio to that of its phylogeny and ontogeny; he is practically a field naturalist, and knows the haunts of his creatures rather than the facts of their

evolution; he is more concerned with the appearance of the living form than with its structure; but he is, nevertheless, not seldom, a master of his craft. The value of his observations was appraised and canonized by Darwin; but that it should be less superficial, that it should be more introspective, have a wider meaning, and a more philosophical clue, is unquestionable, and a book like this supplies the one thing needful. Zoology can neither be divorced from the fields nor from the laboratory—it is part and parcel of our own history; in an evolutionary sense “our birth is but a sleep and a forgetting”; and even the Echinoderma, when thus described, and the inseparable technicalities absorbed by the ready mother wit of both student and peasant, will increase our knowledge of what they are, and our perception of what we are.

There is a most excellent bibliography attached to each branch of the subject; and the book is far more than a zoological ledger posted up to date.

Sexual Dimorphism in the Animal Kingdom: a Theory of the Evolution of Secondary Sexual Characters. By J. T. CUNNINGHAM, M.A. Adam and Charles Black.

Most naturalists are familiar with Darwin's theory of “Sexual Selection,” a theory which perhaps met with less general acceptance than any other put forward by our great biological philosopher, being even vigorously opposed by Mr. Wallace, his fellow-enunciator of the doctrine of “Natural Selection.” Mr. Cunningham not only offers another hypothesis, but altogether starts from a Lamarckian standpoint, and is quite outside the views of either Darwin or Wallace on the subject, frankly stating that his object is to point out “how remarkably the multitudinous facts all agree with the hypothesis that secondary sexual characters are due to the inheritance of acquired characters.” This course leads the author to some most startling speculations. His conclusion being “that the direct effects of regularly recurrent stimulations are sooner or later developed by heredity, but only in association with the physiological conditions under which they were originally produced,” we meet with the following suggestions as to the origin of the beard in males, which “it is probable

enough was derived by ourselves from an Ape-like ancestor." The keepers of the Zoological Gardens having informed Darwin that Monkeys attack each other by the throat, Mr. Cunningham thinks it "not impossible that the growth of the beard was originally excited by the stimulus caused by such attacks, the hair of the throat and around the mouth being regularly moved and pulled by the adversary's jaws and teeth, or perhaps by the hands." That the true cause of the loss of hair on the evolved human body "was the wearing of clothes," will perhaps require more support from anthropological facts than is certainly at present obtainable. Starting from the fact that irritation of a bone by blows will cause exostosis, the assumption is considered "probable that the growth of the antlers was caused originally by the ancestral stags butting their heads together, and so irritating the frontal bone." The comb and wattle of the Cock, *Gallus bankiva*, may owe its original stimulation to the "pecking by the beaks of other birds"; while the fleshy caruncle of the Turkey Cock is ascribed to a similar origin.

These extracts will suffice to show the line of argument used to support this theory; and our object being rather to "notice" new books than to criticise new views, we think we have fairly focussed attention to this return from Darwin to Lamarck. The central idea or argument is carried through the principal zoological phyla, and to support it many interesting and little-known facts are adduced, which will interest and instruct, though perhaps not always convert the reader.

If a second edition should appear, it will be well to revise some personal names. On one page we read—Mr. Roland Trimen, on the next he is Sir Roland Trimen; Mr. Cronwright Schreiner has certainly changed his name, but has not yet called himself "Conrad"; and the late Alfred Tylor did not spell his name "Tyler." These are small matters, but Mr. Cunningham will doubtless be glad to rectify them.

Evolution. By FRANK B. JEVONS, M.A., D. Litt.
Methuen & Co.

ZOOLOGY has long been recognized as a progressive science—and it is. In 1859 Darwin did not introduce the doctrine of

evolution, as is so generally supposed by the "outlanders" of science, but by his own memorable enunciation of the theory of "natural selection" he cleared the speculative air which was full of fads and chimeras, and enabled the giant shadow of "organic evolution" to dominate all biological problems. But other studies besides biological ones were soon controlled by this line of thought; the argument applied to the physical development of the Ape was found to belong to the questions of the non-zoological philosopher; it guided the anthropologist, and absolutely captured the philologist. Theology at first was aghast, but by the year 1883 the late Sir William Flower was found reading a paper on evolution before a "Church Congress"; and now we have this very fair estimation of the theory in a volume which forms part of a series entitled "The Churchman's Library."

The position of the author of this book—which all who take an interest in the application of biological thought to general philosophy should read—is to be gathered by several candid statements scattered through its pages. Thus we read there are certain broad facts beyond dispute. "It is indisputable that there was a period in the history of the earth when there was no life upon it; that the elements which constitute living matter are themselves lifeless; that consciousness is correlated somehow with those organic compounds, the elements of which are inorganic. These facts constitute an irresistible presumption that ultimately mind and matter must obey the same laws." Again, we are told of those "who with us accept the continuity and uniformity between nature and man."

Here we welcome a real sympathy between science and theology, for, as Dr. Jevons clearly states, "religion is not science." He follows an argument that "faith" largely enters into both; but here we enter a dialectical arena, the tourneys in which these pages are not intended to record. The volume, however, is not outside zoology; if there is an evolution in animal life, it applies to man, and must affect all conduct and speculation. That it does so is generally recognized; how it does so is the thesis of this publication.

The Game Birds and Wild Fowl of the British Islands. By CHARLES DIXON. Second Edition, enlarged, improved, and thoroughly revised by the Author. Sheffield: Pawson & Brailsford.

IN perusing this very handsome volume, including Doves and Pigeons, it seems almost as difficult to define the limits of Game Birds as to give a correct description of what is meant by the term "Sportsman."

This is the second edition of a good and useful book, in which the subject is brought up to date. It possesses a very readable introduction, in which, as Mr. Dixon has his own views on migration, he propounds his own conclusions as to "the geographical history of avine life." He zoologically divides the world into three realms: first, an Intertropical or Primogæan realm, with northern and southern limits marked tentatively by the tropics; second, an Arctogæan or Northern realm, which embraces the entire world north of the Tropic of Cancer; third, a Notogæan or Southern realm, which in like manner includes the entire world south of the Tropic of Capricorn; and he looks forward to substantiate these propositions when the exploration of the Antarctic and high Southern regions shall have taken place.

Each bird is amply treated, its nomenclature being followed by its "Geographical Distribution," "Allied Forms," "Habits," "Nidification," and "Diagnostic Characters." Many species are figured, there being forty-one coloured plates, representing fifty-six coloured illustrations; while the number of species and races of Game Birds and Wild Fowl which Mr. Dixon includes in the British avifauna is 127. The literature already existing in reference to these birds seems to have been amply consulted, and little more of importance concerning the distribution and habits can probably be gleaned. This is a good book to possess, especially for those who seek to know the life-histories of these British Birds, as there has been no reason for unnecessary condensation, and ample space has resulted in liberal treatment. The plates have been drawn by Charles Whymper, and their reproduction reflects the greatest credit on the publishers.

EDITORIAL GLEANINGS.

MOST of our readers will have been made cognizant of the recent great "boom" of the last edition of the 'Encyclopædia Britannica,' and doubtless those who could spare the cash, and, what was far more necessary, room, have acquired those excellent volumes. We are glad to notice a very useful and novel publication on the same lines in the 'Temple Encyclopædic Primers,' published by J. M. Dent & Co., in which each subject occupies a small and very inexpensive volume, handy in size, nicely printed, and well illustrated. This method allows selection by those who limit their subjects, and who have already congested shelves. Two only of those yet published have appertained to our domain. One—"An Introduction to Science," by Dr. Alexander Hill, Master of Downing, Cambridge—cannot be considered foreign to our studies, for it admirably conveys what should philosophically qualify many of our conceptions and conclusions on what, are often, but materialistic appearances, while pointing to a moderate and healthy idealism. The second primer is on "Ethnology," by Dr. Michael Haberlandt, of the Ethnological Museum, Vienna, which will hold its place among other much larger and more pretentious publications on the subject.

WE have received the 'Illustrated Annual of Microscopy' for this year, published by Percy Lund, Humphries & Co. Ltd. Besides very much useful information regarding method of work and appliances, for those who study the small things of life, and, as says a motto on the publications of the French Entomological Society, "*Natura maxime miranda in minimis*," there are also some strictly biological articles. Mr. D. J. Scourfield has given a beautifully illustrated article on "A Hyaline Daphnia"; Mr. W. M. Webb has written on "Some Mollusca and the Microscope"; and "British Fresh-water Mites—Arrenurus" is the subject of Mr. C. D. Soar. As this last author well remarks, "very few workers in Britain have taken up this part of pond-life at present." Mr. Macer describes "A unique method of exhibiting microscopically a living fly in the act of feeding." These are the bionomic facts which will revolutionise the zoology of the future. We would fain hear more from microscopists in these pages.

IN the last (April) number of the 'Auk' is a most interesting communication entitled "Care of Nest and Young," by Francis H. Herrick. We can only give the following extracts:—"It is plainly advantageous for birds which breed on or near the ground to remove every particle of litter which

would stain or whiten the leaves and surrounding foliage, and thus advertise the secret of their nest to enemies, even to those who prowl after dusk. When a Red-eyed Vireo, whose behaviour I studied at close range, dropped any bit of excrement by accident, she darted after it with such speed that it was snatched up before reaching the ground, or before falling a distance of four feet. Not a trace of defilement is ever seen around the dwellings of any of these birds.

“On the other hand, predaceous species like Hawks pay no attention to such matters. The excrement of their young is voided in a semi-fluid state, and in a peculiar manner. With tail turned to the edge of the nest the bird shoots it off to a distance of two or three feet, and it may strike the ground six or seven feet from the nesting-tree. The only significance which such actions have is that of keeping the nest clean. The advertisement of the nest-stains on the leaves below is a matter of indifference to these bold and persistent outlaws, who have little to fear from any enemy save men.”

MR. WILLIAM CROSS, the well-known dealer in living zoological specimens, died at Liverpool on April 7th. Mr. Cross belonged to a family of naturalists. His father and grandfather were in their day the best known importers of wild beasts and birds in this country. In the early part of last century the Exeter Change, in the Strand, was the rendezvous of collectors eager to purchase the latest arrivals sent to the proprietor, Mr. Edward Cross. In London fifty-eight years ago Mr. Cross was born, but it was in Liverpool, near the North Docks, that he established his famous emporium. Scarcely a ship arrived at Liverpool from China, India, Australia, Africa, and America without having on board zoological specimens for Mr. Cross from his agents throughout the world, whom he had distributed. Thousands upon thousands of wild animals have passed through his emporium to owners of public and private collections or retail dealers. In twelve years he imported over a million Parrots, besides birds of every variety and from every clime. Twenty-eight years ago he brought to Liverpool a live Gorilla—the first that had been seen in Europe—and sold it to the Berlin Aquarium for no less than £1000. In private life Mr. Cross was known as a staunch teetotaler, and a keen supporter of all philanthropic movements.

WE regret to announce the death of an eminent zoologist in the person of Prof. M. Milne Edwards, Director of the Natural History Museum at the Jardin des Plantes, Paris, who died suddenly on April 21st, in his sixty-sixth year.

